

4. Contributions to the Ornithology of the Philippines.—
No. XI. On the Collection made by Mr. A. H. Everett
at Zamboanga, in the island of Mindanao. By
ARTHUR, Marquis of TWEEDDALE, F.R.S., President of
the Society.

[Received October 26, 1878.]

(Plates LVII.—LIX.)

The Spanish settlement of Zamboanga, situated at the southern extremity of the long south-western limb of the large Philippine island of Mindanao, is classical ground to the ornithologist. More than a century ago Sonnerat collected birds there; and in the year 1839 D'Urville's second Expedition remained a couple of months at Zamboanga. Yet only 19 species in all were recorded from Mindanao when in 1875 I published my List of Philippine Birds. Since that date Dr. Steere and the naturalists of the 'Challenger' Expedition have collected in the vicinity of Zamboanga, and added 40 species, thereby increasing the total of known species to 59.

Mr. Everett arrived at Zamboanga last March, and remained through April and part of May. During his stay he obtained examples of 98 species of birds. Mr. Everett writes that these were all procured "within a radius of ten miles of Zamboanga, chiefly in the hilly country some five miles distant at the back of the town." Of these 98 species only 33 had been previously known to inhabit this part of Mindanao; so that 65 species have been added by Mr. Everett, of which 11 are new to the Philippines, the following 6 being also new to science—

Pseudoptynx gurneyi,
Ninox spilocephalus,
Scops everetti,

Chætura picina,
Lyncornis mindanensis,
Volvocivora mindanensis,—

the remaining 5 having been previously unknown in the Philippines—

Accipiter stevensoni,
Ninox lugubris,
Coccytes coromandus,

Cacomantis sepulchralis,
Ptilopus melanocephalus.

Examples of 6 species previously said to have a Philippine habitat Mr. Everett found at Zamboanga, thus reducing the number of uncertain Philippine species to 29.

Twenty species authentically recorded from Zamboanga and its vicinity are not contained in Mr. Everett's collection; so that the now known total of Zamboanga species identified from specimens amounts to 118.

Mr. Everett writes:—"I enclose a note of the species observed by me here, which I think were not represented by skins in my col-



$\frac{1}{2}$

Smit lith

Hanhart imp

ACCIPITER STEVENSONI



$\frac{1}{2}$

Smit nth

Hanhart imp.

PSEUDOPTERYX GURNEYI.



Smit hth

Hancock imp

CHÆTURA PICINA.

lection. I have only included in these lists those birds the names of which I am absolutely certain I can give with accuracy."

- Cacatua hæmaturopygia*. [New to Zamboanga.]
Haliastur intermedius. [Already recorded.]
Merops bicolor. [Already recorded.]
Entomobia gularis. [Already recorded.]
Sauropatis chloris. [Already recorded.]
Artamus leucorhynchus. [Already recorded.]
Anthus, sp.? [?]
Carpophaga, sp.? [Probably *Ptilocolpa griseipectus*, and new to Zamboanga.]
Turtur dussumieri. [New to Zamboanga.]
Charadrius fulvus. Throat and belly jet-black. [Already recorded.]
Tringoides hypoleucus. [Already recorded.]
Sterna, sp. Bill chrome; crown of head black; wing delicate brownish-grey; underparts snowy white. Rather large. [Probably *Sterna bergii*, and already recorded.]

Three of the above species (omitting the *Anthus* as undeterminable) not having previously been recorded from Zamboanga, when added to the number of species represented by specimens, raise the total number of birds known from this part of Mindanao to 121.

1. CACATUA HÆMATUROPYGIA (1).
 [Zamboanga.]
 I include this species on Mr. Everett's authority.
2. PRIONITURUS DISCURUS (2).
 [Zamboanga, ♀ ♂, April.]
3. TANYGNATHUS LUZONENSIS (3).
 [Zamboanga, ♀, May.]
4. CYCLOPSITTA LUNULATA (4).
 [Zamboanga, ♂ ♀, March, April, and May.]
 Examples with lunated collars are marked female by Mr. Everett, those with blue collars as being males.
5. LORICULUS HARTLAUBI (7).
 [Zamboanga, ♂ ♀, April and May.]
6. HYPOTRIORCHIS SEVERUS (9).
 [Zamboanga, ♂, April: iris dark brown; bill black; cere and orbital skin greenish yellow; legs bright yellow; claws black.]
 In the plumage described by Mr. Sharpe (Cat. Accipitres, p. 397) as belonging to the young bird.
7. MICROHIERAX ERYTHROGENYS (10).
 [Zamboanga, ♂ ♀, April.]

8. ACCIPITER STEVENSONI. (Plate LVII.)

Accipiter stevensoni, Gurney, Ibis, 1863, p. 447, t. xi.

[Zamboanga. *a.* ♀, April: iris golden; bill black; legs greenish ochre. *b.* ♀, April: iris golden; orbital skin greenish-yellow; bill leaden, apex and cere blackish; legs greenish-yellow, but pale brown on the toes; claws dark brown. *c.* ♂, pullus, April: iris yellow; bill black; legs light green; sole of foot yellow; claws black. *d.* (sex?), pullus, April: iris yellow; cere greenish; beak and claws black; legs light greenish; sole of foot yellow.]

Dimensions:—

	Wing. in.	Tail. in.	Tarsus. in.	Middle toe. in.
<i>a.</i> ♀	7·50	5·75	1·87	1·16
<i>b.</i> ♀	6·75	5·75	1·75	1·25
<i>c.</i> ♂ juv. (♀?)	5·75	4·00	1·81	1·25
<i>d.</i> ♂ juv.	5·12	4·00	1·62	1·06

Example *a* is slaty brown above, darkest on the head. Rectrices pale greyish slate-colour, with five dark-brown bands on middle pair. The under surface is white; the pectoral, abdominal, and flank-plumes being traversed with two, three, or more pale-brown bands. The pure white throat has a dark brown and extremely narrow median line formed by the white feathers having a very fine dark edging to the shafts. The quills underneath are regularly banded with white and brown, above brown banded with dark brown. The innermost tertiaries are at most pure white with a pale brown margin. Axillaries pure white with a series of narrow brown cross bars.

Example *b* (which is figured in the accompanying plate) has the breast and abdomen uniform pure bright rufous. When the feathers are discomposed they appear white banded with bright rufous. Vent and under tail-coverts are pure white. Thigh-coverts white, with faint pale rufous cross bands. Middle of throat white, with terminal pale earthy marks. Sides of head dingy pale rufous-brown. Upper plumage brown, mixed with rufous in some of the feathers. Middle pair of rectrices with six transverse brown bands. Quills barred as in example *a*, pale rufous occupying the interspaces between the brown bands to a great extent. Axillaries white, banded with pale rufous.

Examples *c* and *d* are of nestlings in rufous dress. Underneath creamy-fulvous, with broad ruddy brown stripes. A central gular stripe of brown. Middle pair of rectrices with three brown bands. Upper surface of body and head dark brown, with rusty margins and bases to the feathers. Thigh-coverts spotted with light ruddy brown.

Mr. Gurney observes on these specimens as follows:—The hawk “marked *a* on the ticket is a female of *Accipiter stevensoni* in the ordinary adult dress; that marked *b* I believe to be the same; but I have never before seen a *female* with so rufous a breast, though it much resembles the figure of the male type specimen (now somewhat faded) in the ‘Ibis’ (*l. s. c.*). The two nestlings may be either *A. ste-*

vensoni or *A. virgatus*. We have a very similar one from Java ; but as both species are found there, I am not sure to which it belongs, but probably to *A. virgatus*, as I suspect that *A. stevensoni* is only a winter visitor to Java. Judging from the size of the tarsus and foot, I think the larger nestling, marked *c*, is a female though marked male, and that the smaller, marked *d*, is a male."

Having expressed to Mr. Gurney some doubts about the correctness of identifying example *b* with the female of *A. stevensoni*, that gentleman kindly favoured me with the following remarks:—

"Your rufous-breasted hawk from the Philippines, which I marked *b*, is certainly nearer to *A. stevensoni* than to any other species that I am acquainted with ; but since returning it to you I have felt some doubt as to whether it will not prove to belong to a distinct and undescribed species.

"Your bird differs in having the wing shorter than any of our females, and larger than any of our males. Our three males have but four transverse bars on the tail. Of our four females three have five bars, and the fourth (an immature bird from Java) four, like the males, whereas your specimen *b* has six, as mentioned in your letter.

"None of our females have any rufous on the breast ; and in all our males it is hardly more than a tinge of buff. Our type specimen (a male, figured in the 'Ibis' for 1863, pl. 11) is perhaps somewhat faded ; but our Curator is confident that it was never so rufous as is represented in the 'Ibis' plate ; and in this I believe he is right.

"Your bird is more like the male of *A. stevensoni* than it is to the female ; but as your collector has marked it ♀, it probably is so.

"Specimens of *A. stevensoni* are scarce, and we hardly know the limits of variation to which it is liable ; and on this account I should be glad if additional specimens like your skin *b* could be obtained, before venturing to publish it as a species distinct from *A. stevensoni* ; but at the same time, if it should ultimately prove distinct, it would by no means surprise me.

"I ought to add that as *A. stevensoni* has not yet been met with when paired, we have no positive proof that the bird which I suppose to be its female (the type being a male) is so, though I do not myself entertain any doubt of such being the case."

9. SPILORNIS HOLOSPILUS (16).

[Zamboanga, ♂ ♀, April and May.]

10. ELANUS HYPOLEUCUS (18).

[Zamboanga, ♂ juv., May : iris light yellow-brown ; bill black ; cere greenish yellow ; feet pale chrome ; claws black.]

11. NINOX SPILOCEPHALA, sp. n.

[Zamboanga, ♂, March : iris golden ; bill greenish leaden ; feet pale yellow. ♀, April : iris golden ; bill-greenish lead, tinged yellow on culmen and tip ; feet wax-yellow. ♀, April : iris light greenish-yellow.]

Were it not that the large series of examples sent by Mr. Everett (six males and thirteen females) all agree in having spotted heads, I should not have ventured to separate the Zamboanga species from *N. philippinensis* of Luzon. Every variety of markings and colorations is exhibited in this series, from dark brown to tawny-rufous brown above, and stripes and spots of the same colours below; but all the nineteen examples have the frontal and coronal feathers brown, spotted with rufous—in some bright rufous, in others pale tawny rufous. Some have the whole under plumage, from throat to vent, dark-centred; others have the breast almost uniform rich rufous, without pale margins, and with a subterminal brown transverse narrow band.

Every specimen has its sex noted on its label; and the length of the wing in the six birds marked ♂ is greater than in those marked ♀. The wing of the six males ranges in length from 6.50 to 7.0, of the thirteen females from 6.25 to 6.50. Two Luzon males have the wings 6.37 and 5.25. Mr. Sharpe (Cat. ii. p. 168) states 2 inches as the length of the tarsus of an example of *N. philippinensis* in the British Museum: none of these Zamboanga birds has the tarsus longer than 1.12.

12. *NINOX LUGUBRIS*.

Strix lugubris, Tickell, J. A. S. B. ii. p. 573.

[Zamboanga. *a.* ♀, March: iris golden; bill blackish; cere, culmen, and mandible greenish yellow; feet dark chrome-yellow; claws black. *b.* ♀, April: iris deep brown; bill greenish; feet chrome-yellow.]

Dimensions:—

	Wing. in.	Tarsus. in.	Culmen. in.	Tail. in.
<i>a</i>	8.30	1.12	0.62	4.75
<i>b</i>	8.14	1.12	imperfect.	4.82

Six caudal bands. First two primaries without bars. The wings of a ruddy hue. The outer webs of most of the primaries rusty-red.

The remarks Mr. Gurney has been good enough to favour me with about this Zamboanga race of *Ninox lugubris* are as follows:—“I think the outer webs of the primaries unusually rufous. We have only one similar specimen, which is from Formosa and is described in Sharpe’s volume (Catalogue, ii. p. 161); and with this specimen the Zamboanga bird seems to me to agree generally. If *N. japonica* be admitted as distinct from *N. lugubris* (though I doubt whether it ought to be), the Zamboanga specimen, I think, ought to be referred to *N. japonica*.”

Mr. Sharpe has suggested (*t. c.* p. 166) that the large Japanese and North-China form is migratory. These Zamboanga examples favour his hypothesis.

13. *PSEUDOPTYNX GURNEYI*, sp. n. (Plate LVIII.)

[Zamboanga, ♂, pairing, April: iris warm brown; bill greyish white; feet pale grey; claws white tipped with dark grey.]

Sides of face bright pure unmarked rufous. Lengthened stiff plumes springing from base of maxilla rufous mixed with tawny, and many with dark-brown shafts and tipped with dark brown. Space above front of eyes, uniting on forehead and extending back over the eyes, pale tawny rufous. Crown and occiput dark rufous, many of the feathers with a dark brown broad mesial stripe. Nape and sides of neck pure rufous. Lengthened ear-tufts the same, some with very narrow brown mesial linear markings near their apices. Plumes bordering the facial disk albescent tawny; some almost pure white, tipped with dark brown. Chin and upper throat pale tawny rufous. Middle of throat white. Breast and remainder of lower surface pure rufous, more dilute on lengthened tibial plumes and under tail-coverts. A few pectoral plumes, with dark-brown large terminal drops. Many abdominal plumes, with dark-brown elongated central stripes. Back rufous, minutely freckled with brown, each feather with a bold, irregular, dark-brown central stripe. Scapulars like the back, but some of the shorter and outer albescent tawny on outer webs. The dark brown central marks are so arranged that the back, together with the scapulars, appears to have three parallel dark-brown stripes running down it. Uropygium and upper tail-coverts rufous-brown, with darker shafts. Rectrices brown, minutely freckled with pale rufous, and with eight or nine narrow pale rufous cross bands. Minor and median wing-coverts brown, freckled with rufous, and each with a dark narrow central brown line. Major coverts brown on inner web, freckled with rufous on outer. Quills brown, alternately banded with freckled brown and pale rufous. Tertiaries pure rufous, with traces of dark brown along the shafts. Carpal edge white; wing-lining yellowish white; some of the under carpal coverts rufous. Thigh and tarsal coverts pale rufous and tawny white.

Mr. J. H. Gurney writes to me:— "The *Pseudoptynx* is certainly distinct from *P. philippinensis*, and, so far as I know, is undescribed. Besides its very much smaller size, it is very much more rufous below, and of a much darker rufous above; and the dark central marks of the mantle are altogether of a different character, and very much less coarse than those in *P. philippinensis*. As to the difference of size, we have two specimens of *P. philippinensis* here; and the comparison between their dimensions and those of the Zamboanga bird is as follows:—

	Wing.	Tarsus.	Middle toe.	Culmen without cere.
	in.	in.	in.	in.
" <i>P. philippinensis</i> , No. 1..	15.5	2.4	1.6	1.4
" " No. 2..	imperfect	2.5	1.5	1.5
" <i>P. gurneyi</i>	9.3	1.8	1.4	1.1."

The dimensions of the type in the British Museum given by Mr. Sharpe (Cat. ii. p. 43) also much exceed those of the Zamboanga bird.

I name this fine Owl after Mr. Gurney, to whom for many years

I have been largely indebted for great assistance in determining the obscurer species of *Rapaces*.

14. *SCOPS EVERETTI*, sp. n.

[Zamboanga, ♀, April: iris warm brown; bill pale greenish leaden, nearly white; feet whitish grey; claws dark grey. ♂, April: iris deep brown; feet whitish.]

Mr. Everett has sent three examples of a species of *Scops*, which may be described as being a large form of *Scops lempiji* as it occurs in Java. Above it has the deep rich brown colouring of the Javan species; the same broad dark-brown mark in the form of a parallelogram on the head and nape; the same pale-coloured forehead, stripe above each eye and round the nape, and the broad dark brown stripe leading from behind the eye, and including most of the ear-tufts. In the Zamboanga species (as represented in Mr. Everett's series) there are no pale uniform tawny or fulvous scapulars. Underneath, the markings differ from those of the Javan bird by being more confused, and by the absence of regular dark-brown cross markings on the abdominal plumes. The general colouring of the under surface is of a ruddier brown.

Dimensions:—

	Wing. in.	Tarsus. in.	Tail. in.	Culmen. in.
♂ . . .	6.50	1.20	3.50	0.62
♀ . . .	6.75	1.20	3.62	0.68

Mr. Sharpe, to whom I submitted two of the specimens, has obliged me with the following observations:—"Your Owl is of the *S. lempiji* group, having that peculiar light streak on the sides of the crown, running onto the ear-tufts; but underneath it is quite aberrant, and verges more towards the Moluccan *S. leucospilus* section. At the same time I expect it will come very near *Scops umbratilis*, Swinhoe."

Mr. Gurney writes, "The Owl is new to me, and different to any that we have here."

15. *THRIPONAX JAVENSIS* (23).

[Zamboanga. ♂, March: iris yellow.]

The white at the tips of the primaries is unusually developed in the specimens from Zamboanga.

16. *CHRYSOCOLAPTES LUCIDUS* (32).

Chrysocolaptes maculiceps, Sharpe, Tr. L. S. ser. 2, Zool. i. p. 314, t. xlvi. fig. 2.

[Zamboanga, ♀, May: iris crimson.]

An example (marked a female) wears the plumage of *C. maculiceps*, as described and figured by Mr. Sharpe.

17. *YUNGIPICUS VALIDIROSTRIS* (33 *partim*).

Picus nanus, Vigors, Blyth, J. A. S. B. 1845, p. 197.

Picus validirostris, Blyth, Cat. Calc. Mus. p. 64. no. 305; J. A. S. B. 1849, p. 805.

[Zamboanga, ♂ ♀, May: iris crimson?; bill black; mandible lead-grey; feet olive.]

When writing on *Picus maculatus*, Scopoli (Tr. Z. S. ix. p. 148), I stated that the titles I then brought together were treated as synonyms on the assumption that the islands of Luzon, Panay, and Mindanao possessed but one and the same species of *Yungipicus*. I had had no opportunity of examining an example from any one of the Philippine Islands. Since then Mr. Everett has sent me examples of a species of the genus from Luzon; and these I identified (P. Z. S. 1877, p. 689) with *P. maculatus*, rather than create a new title, while their dimensions were too small for *P. validirostris*, Blyth. The birds from Zamboanga differ specifically from the Luzon species. They are larger; the uropygium and upper tail-coverts are unspotted tawny-white; and the rectrices are tawny buff banded with dark brown, and not dark brown, for the most part, as in the Luzon bird, with narrow albescent bands or marks. In both, the lower throat and upper breast are spotted, and not streaked, as in *Y. fuscoalbidus* of the Sunda Islands and Malacca. Until typical examples of *P. maculatus* from Panay are compared, it cannot be affirmed whether the type of *P. maculatus* belongs to the Luzon or the Mindanao species, or whether it may not be a species distinct from either. In the meantime I adopt Blyth's title, the dimensions he gives being exactly those of the Zamboanga species:—bill to forehead 0.75; wing 3.25.

I may mention that *Y. aurantiiventris*, Salvadori, is an excellent species, quite distinct from *Y. fuscoalbidus*.

18. *HARPACTES ARDENS* (34).

[Zamboanga, ♀, March: coloration of soft parts as in male.]

The coloration of the soft parts is not mentioned on the labels of the males sent.

19. *ALCEDO BENGALENSIS* (38).

[Zamboanga, ♀, March.]

20. *PELARGOPSIS GIGANTEA*.

Pelargopsis gigantea, Walden, Ann. & Mag. Nat. Hist. ser. 4, xiii. p. 123.

[Zamboanga, ♂ ♀, March and May.]

21. *CEYX ARGENTATA*.

Ceyx argentata, Tweeddale, *antea*, p. 108. no. 7, t. vi.

[Zamboanga, ♂, May.]

22. *ENTOMOBIA GULARIS* (44).

[Zamboanga.]

23. HALCYON WINCHELLI.

Halcyon winchelli, Sharpe, Tr. L. S. (2) Zool. i. p. 318, t. xlvi.

[Zamboanga, ♀, April: iris dark brown; bill black; the basal half of mandible white; feet light greyish-green.]

I have not been able to compare the Zamboanga birds with the Basilau type; but the female agrees well with Mr. Sharpe's description and plate. A second example (sex unrecorded) differs in having the whole under surface pure white.

24. CALIALCYON COROMANDA (46).

[Zamboanga, ♀, March.]

The discovery of this species by Mr. Everett at Zamboanga removes all doubts of its being an inhabitant of the Philippines.

25. ACTENOIDES HOMBRONI (48).

[Zamboanga, ♂, April: iris brown; bill orange-red; the culmen blackish; feet dirty greenish orange.]

In the perfectly adult male the crescentic pectoral markings disappear.

26. XANTHOLEMA HÆMACEPHALA (50).

[Zamboanga, ♂, March and April.]

27. MACROPTERYX COMATUS (52).

[Zamboanga, ♂, April.]

28. CHÆTURA PICINA, sp. n. (Plate LIX.)

[Zamboanga, ♀, April.]

Black with a blue gloss, greenish in some lights. Chin, throat, and larger under wing-coverts pure white. Wing 6·37; tail 1·25.

29. LYNCORNIS MINDANENSIS, sp. n.

[Zamboanga, ♂, April: iris warm brown; feet purplish brown.]

Typical *L. macrotis* (ex Luzon) has the crown, forehead, ear-tufts, and nape rufous brown, of almost the same shade as in *L. temminckii*. The three examples of the species of *Lyncornis* which inhabits the vicinity of Zamboanga, sent by Mr. Everett, differ from *L. macrotis* by having the crown, nape, forehead, and ear-tufts dark greyish-brown, and not rufous, by all the browns of the plumage being much darker, and by the wing being shorter. Wing 9·90.

30. CAPRIMULGUS MANILLENSIS (55).

[Zamboanga, ♀, April.]

Compared by Mr. Sharpe with the type.

31. BATRACHOSTOMUS SEPTIMUS.

[*Batrachostomus septimus*, Tweeddale, P. Z. S. 1877, p. 542, no. 13.]

[Zamboanga, ♂, April: iris orange-yellow; bill light horn-

brown; feet pale ochreous yellow; nails grey. Interior of gape, ♂ ♀, lemon-yellow.]

Two examples of the adult male and one of an adult female are sent by Mr. Everett. The white nuchal band of the female is not so conspicuous as in the type, nor are the white markings of the throat-band and pectoral plumes. The general hue of the male-plumage agrees with that of the female; but in the males the elongated scapulars have the outer webs pure white, with a black subterminal spot on the inner web. Four examples of this species are now known, two of males and two of females; and all four are in the rufous phase. Mr. Everett, in his remarks about one of the males is very explicit; he writes:—"I have one *Batrachostomus*, a good skin; it is in rufous plumage, and is ♂. I took especial care in the sexing; and luckily the parts had not been touched by shot. Judging from the size of the testes, I think the bird is rather immature."

32. CACOMANTIS SEPULCHRALIS ?

Cuculus sepulchralis, S. Müller, Land- en Volkenk. p. 177.

[Zamboanga, ♂ ♀, April.]

Mr. Everett obtained five examples of a Plaintive Cuckoo, two of which are in adult plumage, and so closely resemble the Javan *C. sepulchralis*, that I do not venture to separate them. The dimensions of the wings and tail are slightly less, while the chin and throat are of the same rufous as the breast, and not grey. S. Müller described (*l. c.*) the chin of the Javan and Sumatran type as being grey; and so it is in my Javan specimens; but it is not certain that in Javan birds this grey does not change into rufous. An example obtained by Mr. Everett at San Mateo, Luzon (*C. merulinus*, a, P. Z. S. 1877, p. 691. n. 19), belongs, without doubt, to *C. sepulchralis*, and has the chin and upper throat grey, the others being examples of true *C. merulinus*. This last species can hardly be kept separate from the grey-breasted species of Continental Asia, *C. threnoides*, &c.

33. SURNICULUS VELUTINUS.

Surniculus velutinus, Sharpe, Tr. L. S. ser. 2, Zool. i. p. 320.

[Zamboanga, ♀, April.]

34. CHALCOCOCCYX MALAYANUS.

Cuculus malayanus, Raffles, Tr. L. S. xiii. p. 286, "Malay Peninsula" (March 1821).

? *Cuculus basalis*, Horsfield, Tr. L. S. xiii. p. 179, "Java" (April 1820).

[Zamboanga. a. ♂, April: iris burnt-sienna colour; orbital ring fine vermilion; bill blackish; feet very dark lead-grey. b. April: iris light yellowish brown; bill black; legs lead-grey; nails black.]

Mr. Everett sends three Golden Cuckoos, which, although somewhat smaller than typical examples, differ in no other respect.

Wing 3·62. I adopt the more recent specific title of *malayanus*, as it has not as yet been absolutely demonstrated that the Malayan-Peninsula bird is the same as the Javan. The only Javan example I have seen is pure white underneath, without any transverse bands. Above, the whole back is very dark green without any coppery gloss, the head and nape coppery greenish-brown. This individual is fairly represented on plate 102. f. 2, of the 'Planches Coloriées,' under the title of *Cuculus chalcites*, Illiger, exact habitat unknown. It may be only a phase of plumage; but Horsfield and Moore (Cat. Mus. E. I.C. ii. pp. 706, 707) keep the Malaccan species distinct from the Javan.

35. *HIEROCOCCYX PECTORALIS* (60).

[Zamboanga, ♂, April: iris pale yellow; orbital skin bright chrome-yellow; bill black; mandible and base of maxilla greenish; feet bright wax-yellow; claws horn-yellow.]

A single example, which agrees in every detail with the description given by Dr. Cabanis. It may also belong, as suggested by me (*l. c.*), to *Cuculus hyperythrus*, Gould; but it differs from the figure of that species in wanting the black chin, in not being so intensely rufous underneath, in the rufous colouring not extending below the breast, and in the upper plumage not being of so dark a shade of grey. It also has four, distinct, transverse, narrow, dark caudal bands, and not merely two as described by Mr. Gould.

36. *COCCYSTES COROMANDUS*.

Cuculus coromandus, Linn. S. N. i. p. 171. no. 20.

[Zamboanga, ♀, March: iris brown; bill jet-black; feet bluish grey; interior of gape salmon-red.]

New to the Philippines, and a most unexpected addition to their fauna.

37. *EUDYNAMIS MINDANENSIS* (61).

[Zamboanga, ♀, March: iris bright crimson; bill and legs greenish plumbeous. ♂, March.]

These are typical examples of the species, and do not differ from North-Mindanao examples. They are somewhat smaller than birds from Guimaras and Zebu. Maximum length of wing 7·50. In the female the spots and bands appear in this species to be always rufous.

38. *CENTROCOCCYX VIRIDIS* (64).

[Zamboanga, March.]

39. *PYRRHOCENTOR MELANOPS* (65).

[Zamboanga, ♂ ♀, March.]

Sexes alike.

40. *BUCEROS MINDANENSIS*.

Buceros mindanensis, Tweeddale, P. Z. S. 1871, p. 543.

[Zamboanga, ♂ ♀ juv., March.]

41. *PENELOPIDES AFFINIS*.

Penelopides affinis, Tweeddale, P. Z. S. 1877, p. 824. n. 29. f. 1.

[Zamboanga, ♂ ♀, March.]

A new outer rectrix has the central band pure white, the central bands on all the other rectrices being bright rufous.

42. *LANIUS NASUTUS* (70).

[Zamboanga, ♂ ♀, April.]

Mr. Everett sends a nestling killed in April.

43. *LANIUS LUCIONENSIS* (72).

[Zamboanga, ♂, April.]

44. *GRAUCALUS STRIATUS* (73).

[Zamboanga, ♂, April: iris pale yellow.]

Two examples marked ♂ have uniform plumbeous breasts and banded underparts and uropygium. One marked ♀ is banded from the chin downwards as well as on the uropygium.

45. *VOLVOCIVORA MINDANENSIS*, sp. n.

[Zamboanga. *a.* ♂, April: iris dark brown; bill and legs black. *b.* ♀, April: iris dark brown. *c.* ♀, April: iris dark chocolate-brown.]

Adult male (*a*). Chin, cheeks, sides of head, space before the eyes, a broad supercilium, ear-coverts, forehead, throat, and upper breast jet-black. Remainder of breast, crown, and whole under surface of body dark leaden-grey, paler near the vent and on the under tail-coverts. Wing-coverts, nape, and axillaries a slightly lighter shade of leaden-grey, palest on the uropygium and upper tail-coverts, which are slightly mixed with white. Quills above black, with faint grey margins. Sixth and remaining primaries tipped with greyish white. Secondaries and tertiaries leaden-grey on their outer webs. Part of inner webs of quills, seen from underneath, pale grey. This colour commences at the base of the first primary, occupying but a small part of it, but is more extended on each succeeding quill, and reaches to the extremities of the inner quills. Rectrices jet-black; outer pair with a large grey terminal mark, the same colour being slightly indicated on the next pair. Carpal edge and wing-lining almost black.

Adult female (*b*). The same as the male, but the grey colour of the whole plumage of a paler shade, the uropygium more albescent, and no black about the head, throat, and breast. Carpal edge and axillaries pale grey.

Young female (*c*). Like the adult, but the grey colour not so pure. The chin, central part of the throat, a few scattered feathers on the breast and flanks, the wing-lining, and axillaries finely banded with white. Upper tail-coverts nearly pure white. Outer margins of some of the secondaries and carpal edge inclining to white.

Dimensions :—

	Wing. in.	Tail. in.	Tarsus. in.	Culmen. in.
♂ ad.	4·62	4·0	0·88	0·88
♀ ad.	4·50	4·0	0·88	0·88
♀ juv.	4·48	3·88	0·88	0·87

A representative form of *V. morio* ex Celebes, but altogether of a darker shade of grey, with a black forehead, and with the inner margins of the quills grey, and not pure white.

46. LALAGE DOMINICA (76).

[Zamboanga, ♀, April.]

47. DICRURUS STRIATUS.

Dicrurus striatus, Tweeddale, P. Z. S. 1877, p. 545. no. 20.

[Zamboanga, ♀, March: iris crimson.]

48. LEUCOCERCA NIGRITORQUIS (83).

[Zamboanga, ♀, April.]

49. CYORNIS PHILIPPINENSIS (84 *partim*).

Cyornis philippinensis, Sharpe, Tr. L. S. ser. 2, Zool. i. p. 325.

[Zamboanga, ♀, March.]

50. HYPOTHYMIS AZUREA (85).

[Zamboanga, ♀, May: maxilla black, mandible light blue; legs dark grey slate; interior of gape yellow.]

51. BRODERIPUS ACORRHYNCHUS (90).

[Zamboanga.]

52. ERYTHROPITTA ERYTHROGASTRA (94).

[Zamboanga, ♂ ♀, March, April, May.]

These examples all belong to *E. erythrogastra*, and not to the Balabac race named *B. propinquus* by Mr. Sharpe (Tr. L. S. (2) Zool. i. p. 330). The young Dumalon (Mindanao) example obtained by Dr. Steere, and doubtfully identified with *B. propinquus* by Mr. Sharpe (*l. c.*), in all probability belongs to *E. erythrogastra*.

An immature bird, killed in April near Zamboanga, is dirty rufous brown above, with dashes of green; rectrices blue; wing-feathers without a trace of blue; under surface dirty white, feathers margined with pale rufous brown; some scarlet feathers on the breast; vent and under tail-coverts washed with brownish red. The females differ in the scarlet colouring of the abdominal region not being so intense and vivid, and in the throat not being so dark brown, almost black. The blue colouring of the breast is not exhibited until complete maturity, that part remaining green. In fully mature birds of both sexes the green pectoral band is almost entirely replaced by blue.

53. MELANOPITTA SORDIDA (95).

[Zamboanga, ♂, March : iris chocolate ; bill black ; legs brownish grey. ♂ ♀, March, April, and May.]

This species has the black central abdominal patch much more largely developed than in *M. muelleri* ex Borneo. In no other respect does it appear to differ. The extent of pure white on the quills is dependent on sex. Of fourteen individuals with the sex noted by Mr. Everett, nine are males and five are females. The primaries of the male have a much greater white surface than is found in the primaries of the female. The 6th, 7th, and 8th primaries are scarcely tipped with black ; and the first five primaries have double the amount of white that exists on the primaries of the female. On examining Luzon and Negros examples with the sexes noted by Dr. B. Meyer, the same character differentiates the sexes. In Bornean individuals of *M. muelleri* (sex determined by Mr. Everett) the sexes can be discriminated by the amount of white on the remiges. In *M. cucullata* some of my examples exhibit a maximum of white on the quills and the others a minimum ; but as none have had their sexes determined by dissection, I am unable to affirm that in that species the same law holds good. In two Zamboanga skins the green of the breast and flanks is assuming the blue tint so prominent in the large representative form *M. steerii*.

54. MELANOPITTA STEERII.

Brachyurus steerii, Sharpe, 'Nature,' August 1876, Tr. L. S. ser. 2, Zool. i. p. 329, t. xlix.

[Zamboanga, ♂, March and April.]

55. MACRONUS STRIATICEPS.

Macronus striaticeps, Sharpe, Tr. L. S. ser. 2, Zool. i. p. 331.

[Zamboanga, ♂, March : iris white : bill black ; legs purplish grey.]

56. IXUS GOIAVIER (99).

[Zamboanga, ♂ ♀, March.]

57. POLIOLOPHUS UROSTICTUS (101).

[Zamboanga, ♂, April : orbital ring light yellow.]

58. HYPSSIPETES RUFIGULARIS.

Hypsipetes rufigularis, Sharpe, Tr. L. S. ser. 2, Zool. i. p. 335.

[Zamboanga, ♀, April ; iris crimson ; bill blackish brown ; legs brown.]

59. MONTICOLA SOLITARIUS (103).

[Zamboanga, ♀, April.]

60. COPSYCHUS MINDANENSIS (106).

[Zamboanga, ♂, March.]

61. PHYLLOSCOPUS BOREALIS.

Phyllopneuste borealis, Blasius, Naumannia, 1858, p. 313.

[Zamboanga, ♂ ♀, April.]

62. ORTHOTOMUS CINEREICEPS?

Orthotomus cinereiceps, Sharpe, Ibis, 1877, p. 113, t. ii. f. 2, "Basilau."

[Zamboanga, ♂, March: iris clay-orange; ♀, April.]

Mr. Sharpe's title is here adopted with doubt for this Zamboanga species of Tailor-bird, because it does not quite agree with the description and figure, and I have not been able to compare it with the type (now in America).

In the example marked as being of a male, the cheeks, chin, and entire throat are jet-black. In that of the female the chin and upper part of the throat are white, the middle of the breast, the abdomen, and vent are silky white, whereas in the male these parts are bright olive-green. The rectrices of the male are devoid of a subterminal bar; but in those of the female brown subterminal bars are conspicuous. It is not improbable that the male example with entire throat black is *O. cinereiceps* in full breeding-dress.

63. ORTHOTOMUS FRONTALIS.

Orthotomus frontalis, Sharpe, Ibis, 1877, p. 112, t. ii. f. 1, "Zamboanga."

[Zamboanga, ♂ ♀, March and April.]

The examples noted as belonging to males have no subterminal bar on the rectrices. Those marked as being of females have the subterminal bar well pronounced.

64. BUDYTES VIRIDIS (114).

[Zamboanga, ♂, April.]

65. ZOSTEROPS EVERETTI.

Zosterops everetti, Tweeddale, P. Z. S. 1877, p. 762. no. 42.

[Zamboanga, ♂ ♀, April.]

66. DICÆUM CINEREIGULARE.

Dicæum cinereigulare, Tweeddale, P. Z. S. 1877, p. 829. no. 50, "N. Mindanao."

[Zamboanga, ♀, April: iris dark brown; bill black; legs very dark grey, nearly black.]

The female differs from the male in wanting the orange-red interscapular patch, in the abdomen, vent, and under tail-coverts being pure yellow, and in the upper plumage being deeply tinged with olive-green.

67. DICÆUM RUBRIVENTRE (120 partim).

Pipra papuensis, Gm. S. N. i. p. 1004.

[Zamboanga, ♀, April: iris dark blood-red; bill and legs black.]

68. NECTAROPHILA JULIÆ.

Nectarophila julia, Tweeddale, P. Z. S. 1877, p. 547. no. 32, "Melanipa."

Cinnyris julia (Tweeddale), Shelley, *Cinnyridæ*, pts. vii. & viii.

[Zamboanga, ♂ ♀, April: iris brown; bill and feet black.]

In some examples of the male the breast is suffused with orange-red; in others little or no red is perceptible.

69. CYRTOSTOMUS JUGULARIS (123).

[Zamboanga, ♂ ♀, March and April.]

70. ANTHOTHEPTUS CHLOROGASTER.

Anthreptes chlorigaster, Sharpe, Tr. L. S. ser. 2, Zool. i. p. 342; Shelley, *Cinnyridæ*, pt. vi. pt. vii. t.

[Zamboanga, ♀, April: iris indian-red; bill light umber-brown; legs greenish leaden.]

71. RHABDORNIS MYSTACALIS (124).

[Zamboanga, ♂, April.]

A single example, which differs from the Luzon species in its much shorter bill. Culmen barely 0·62, in the Luzon bird fully 0·75. The wing is also shorter; and the colouring of the wings and back is warm brown, and not greyish olive-brown.

72. CORVUS PHILIPPINUS (125).

[Zamboanga, ♂, March.]

73. CALORNIS PANAYENSIS (128).

[Zamboanga, ♂, March.]

74. SARCOPS CALVUS (129).

[Zamboanga, ♀, March.]

75. MUNIA JAGORI (132).

[Zamboanga, ♂ ♀, March.]

76. OSMOTRERON VERNANS (135).

[Zamboanga, ♂ ♀, March, April, May.]

77. PTILOPUS MELANOCEPHALUS.

Columba melanocephala, Forster, Zoologia Indica, p. 16. no. 7, t. viii., ex Java (1781).

[Zamboanga. *a.* ♂, March: iris, orbital skin, and bill yellow, with more or less of a green tinge; feet carmine, nails dark grey. *b.* ♂, April: iris yellow; bill yellow-green.]

Hardly separable from the Javan species. Wing 4·50. The tint of the throat-patch resembles that of *P. xanthorrhous*; but the abdomen and crissum are yellow, and not orange. New to the Philippines.

78. *RAMPHICULUS OCCIPITALIS* (138).

[Zamboanga, ♀ (juv.), March : iris dark brown ; bill light brown, the basal half dull red ; feet coral-red.]

Sexes alike.

79. *PHABOTRERON BREVIROSTRIS*.

Phabotreron brevirostris, Tweeddale, P. Z. S. 1877, p. 549. no. 38.

[Zamboanga, ♂ ♀, March and April.]

The pale, and not rufous, chin and throat distinguishes this species from *P. leucotis*.

80. *CARPOPHAGA ÆNEA* (141).

[Zamboanga, ♀, March.]

81. *PTILOCOLPA GRISEIPECTUS* (142)?

Mr. Everett remarks *in epist.* :—"The *Carpophaga* of the Zamboanga list is a bird markedly smaller than *C. ænea*; and those parts which in the latter are coloured fine bronzy green, are in the smaller species dark iron-grey." The above-given description, so far as it goes, agrees with *Ptilocolpa griseipectus*, a rare species in museums, and the exact habitat of which in the Philippines remains to this day (unless this identification is correct) undetermined.

82. *MYRISTICIVORA BICOLOR* (143).

[Zamboanga, ♀, May.]

83. *HEMIPHAGA POLIOCEPHALA* (144).

[Zamboanga, ♀ (not quite adult) : bill black ; orbital skin crimson.]

Sexes alike. The margin of the inner web of the first primary is scooped out, and that of the second a little less so.

84. *MACROPYGIA EURYCERCA*.

Macropygia eurycerca, Tweeddale, *antea*, p. 288. no. 49.

[Zamboanga, ♂ ♀, March and April.]

Considerably smaller than the Negros type, but otherwise undistinguishable. Wing 6·75, as against 7·50 ; tail 7·00, against 8·00.

85. *TURTUR DUSSUMIERI* (147).

[Zamboanga.]

Included on the authority of Mr. Everett.

86. *PHLOGENAS CRINIGERA*.

Phlogœnas crinigera (Pucheran), Tweeddale, P. Z. S. 1877, p. 833. no. 66.

[Zamboanga, ♂ ♀, March and April.]

Sexes alike. An example marked "♂ juv." by Mr. Everett has the claret-coloured pectoral plastron only indicated by a few red

plumes, and the terminal margin of the major coverts fulvous instead of pale grey, the remainder of the plumage being marked and coloured as in the adult.

87. *CHALCOPHAPS INDICA* (150).

[Zamboanga, ♂ ♀, March.]

88. *GALLUS BANKIVA* (153).

[Zamboanga, ♂ ♀, March.]

89. *MEGAPODIUS DILLWYNI*.

Megapodius dillwyni, Tweeddale, P. Z. S. 1877, p. 766.

[Zamboanga, ♀, March: iris burnt sienna-brown; bill horn-brown; orbital skin dirty crimson; legs reddish-brown; tarsi¹ dark brown. ♂, March: orbital skin dark purplish brown.]

90. *GALLINULA CHLOROPUS* (169).

[Zamboanga, ♀, May: iris light warm brown; bill greenish yellow; frontal plate orange-red; legs grass-green.]

91. *GALLICREX CINEREA* (170).

[Zamboanga, ♂, March and April.]

92. *ERYTHRA PHÆNICURA* (171).

[Zamboanga, ♀, March.]

93. *ORTYGOMETRA CINEREA* (172).

[Zamboanga, ♂, April.]

94. *PORZANA FUSCA* (174).

[Zamboanga, ♂, April: iris brick-red; legs dull wax-red.]

95. *GALLINAGO MEGALA* (188).

[Zamboanga, ♀, March.]

96. *RHYNCHÆA CAPENSIS* (189).

[Zamboanga, ♂, May.]

97. *ARDETTA CINNAMOMEA* (192).

[Zamboanga, ♀, March.]

98. *HERODIAS INTERMEDIA* (196).

[Zamboanga, ♂, March.]

99. *MELANOPELARGUS EPISCOPUS*.

Ardea episcopus, Bodd. Tabl. d. Pl. En. p. 54.

[Zamboanga, ♀, March.]

In full dress.

¹ So written on label; perhaps a slip of the pen for the word "toes" or "claws."

100. *DENDROCYGNA VAGANS* (203).

[Zamboanga, ♀, April.]

101. *DYSPORUS SULA* (214).

[Zamboanga, ♀, May: iris white; bill dirty white; orbital and gular space pale green; feet very light greenish yellow; nails grey.]

A young female in dirty-brown plumage, darkest on breast, throat, neck, head, and back.

5. Supplementary Note on the Neotropical Squirrels.

By EDWARD R. ALSTON, F.L.S., F.Z.S., &c.

[Received November 8, 1878.]

I regret to say that several errors have crept into my paper "On the Squirrels of the Neotropical Region,"¹ owing in part to my absence from town when the sheets were passing through the press. Two or three of these appear sufficiently serious to require correction.

SCIURUS VARIABILIS. In the remarks on this species *S. rufo-niger* is a clerical error for *S. brunneo-niger*, at p. 666, seventh line, and at p. 667, second line.

SCIURUS PUSILLUS. At p. 670 I remark that I was not able to ascertain Geoffroy's type in the Paris Museum. It appears that I had overlooked it; for Professor A. Milne-Edwards has kindly informed me that it is still there. Unfortunately the skull is wanting, so that its age cannot well be ascertained. The want, however, is supplied by the British-Museum specimens, of which the skulls and teeth show them to be *fully adult*, although an unhappy misprint (p. 671, eighteenth line) makes me state the exact contrary. M. Milne-Edwards has sent me the following measurements of the types of *S. pusillus* and *S. rufo-niger*:—

S. pusillus.

	millim.	inches.
Length of head	0·039	1·56
„ head and body	0·089	3·56
„ tail (imperfect)		

S. rufo-niger.

	millim.	inches.
Length of head	0·048	1·92
„ head and body	0·178	7·12
„ tail (with hair)	0·139	5·56

This last specimen appears to me to have been considerably over-stretched in mounting.

In conclusion I may add that I have had the pleasure of receiving a letter from Mr. J. A. Allen, in which he accepts almost all the determinations at which I arrived in the paper in question.

¹ *Suprà*, pp. 656-670.